

Powdery mildew – *Oidium caricae*

Symptoms

While mycelia growth appear on the upper surface of the leaf, flower stalks and fruit. Seven attack causes yellowing and defoliation of leaves.



Pathogen

It is an obligate parasite. The mycelium is hyaline, septate and haustoria develop in epidermal cells. Conidia are hyaline.

Mode of spread and survival

The pathogen spread through wind borne conidia.

Management

Spray Wettable Sulphur 0.25% or Dinocap 0.05% or Chinomethionate 0.1% or Tridemorph 0.1%.

Papaya ring spot – Papaya ring spot virus

Symptoms

Vein clearing, puckering and chlorophyll leaf tissues lobbing in. Margin and distal parts of leaves roll downward and inwards, mosaic mottling, dark green blisters, leaf distortion which result in shoe string system and stunting of plants. On fruits circular concentric rings are produced. If affected earlier no fruit formation.



Pathogen

The virus particles are rod shaped and thermal inactivation point of the virus lies between 54 and 60°C.

Mode of spread

Vectored by aphids *Aphis gossypii*, *A. craccivora* and also spreads to cucurbits not through seeds.

Management

Raise papaya seedlings under insect-proof conditions. Plant disease free seedlings. Raise sorghum / maize as barrier crop before planting papaya. Rogue out affected plants immediately on noticing symptoms. Do not raise cucurbits around the field.

Leaf curl – *Papaya leaf curl virus*

Symptoms

Curling, crinkling and distortion of leaves, reduction of leaf lamina, rolling of leaf margins inward and downward, thickening of veins. Leaves become leathery, brittle and distorted. Plants stunted. Affected plants does not produce flowers and fruits.



Mode of spread

Spread by whitefly *Bemisia tabaci*.

Management

Uproot affected plants. Avoid growing tomato, tobacco near papaya. Spraying with systemic insecticides to control the vector.

Anthracnose – *Colletotrichum gloeosporioides*

Symptom

If affect leaf and stem on erotic spots are produced. On fruit initially brown superficial discoloration of the skin develops which are circular and slightly sunken. Then they coalesce in which sparse mycelial growth appear on the margins of a spot. Under humid condition salmon pink spores are released. Fruits mummified and deformed.



Mode of spread

Infection is caused by fruit from field. Secondary spread by conidia by rain splashes

Management

Spray with Carbendazim 0.1% (or) Chlorothalonil 0.2% or Mancozeb 0.2%.

Lecture 06 - Disease of Guava and Sapota

Guava

Anthracnose: *Colletotrichum gloeosporioides*

Symptoms

Symptoms of this disease are observed on mature fruits on the tree. The characteristic symptoms consist of sunken, dark colored, necrotic lesions. Under humid conditions, the necrotic lesions become covered with pinkish spore masses. As the disease progresses, the small sunken lesions coalesce to form large necrotic patches affecting the flesh of the fruit.



Pathogen

Conidia are hyaline, aseptate, oval to elliptical. Conidiophore is cylindrical. Acervilli are dark brown to black.

Mode of Spread and Survival

The conidia are spread by wind or rain.

Management

Spray Mancozeb 0.25%.

Guava rust: *Puccinia psidii*

Symptoms

The pathogen can affect foliage, young shoots, inflorescences and fruit of guava. Typical symptoms associated with this disease include distortion, defoliation, reduced growth and if severe, mortality. On fully expanded leaves, dark bordered, roughly circular brown lesions with yellow halos develop.



Management

Control of guava rust is based on the use of fungicides. Scouting fields for onset of disease or during the times of year when environmental conditions are favorable for pathogen infection are recommended so that proper and timely fungicide applications can